Preface

Congratulations on your purchase of this advanced digital camera, with capabilities of a video recorder and music player. Ensure that you read this manual carefully and keep it in a safe place for future reference.

About this manual

Every effort has been made to ensure that the contents of this manual are correct and up-to-date. However, no guarantee is made regarding the accuracy of the contents, and the manufacturer reserves the right to make changes without notice.

Copyright

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Safety

- Do not use or store the product in dusty, dirty, or sandy areas, as its components may be damaged.
- Do not store the product in hot areas. High temperatures can shorten the life of electronic devices, and warp or melt certain plastics.
- Do not store the product in cold areas. When the product warms up to its normal temperature, moisture can form inside, possible damaging the electronic circuits.
- Do not attempt to open the casing.
- Do not drop or knock the product. Rough handling may damage the internal components.
- Do not use harsh chemicals, cleaning solvents or strong detergents to clean the product. Wipe the product with a soft cloth slightly dampened.
- If the product or any of its accessories are not working properly, take them to your nearest qualified service center. The personnel there will assist you, and if necessary, arrange for the product to be repaired.

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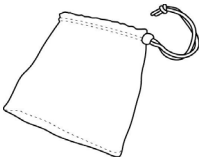
Getting started

Checking the accessories supplied

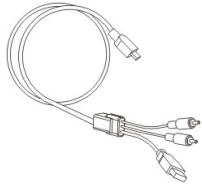


Pouch

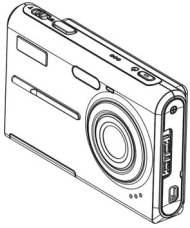
Strap

Battery

Quick Guide



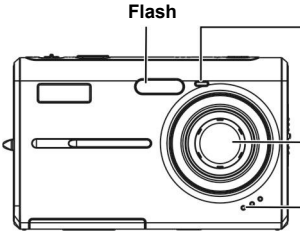
Composite Video Cable

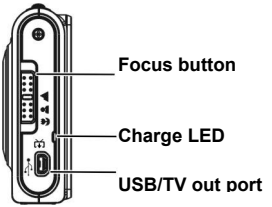


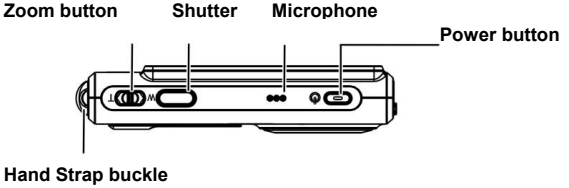
Camera

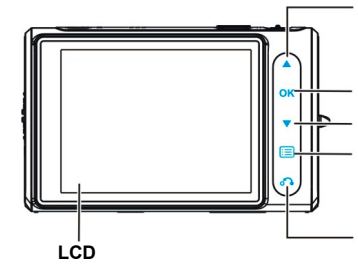
CD-ROM（Includes User Manual）

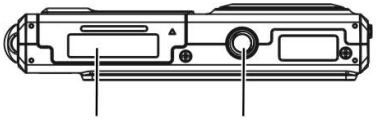
1 Camera parts





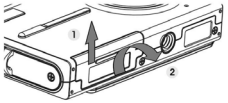




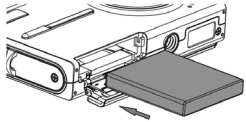


2 Inserting the battery/and SD card (not supplied)

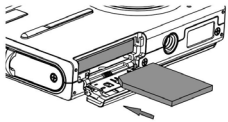
1



2



3



1. Open the battery door. (①→②)
2. Load the included battery into the battery compartment.

3. Insert the SD card into the slot.
4. Close the battery door.

CAUTION!

Use only the specified battery for this camera. Other power sources may cause a fire.

The battery should be inserted in the battery compartment with the ends orientated correctly.

NOTE:

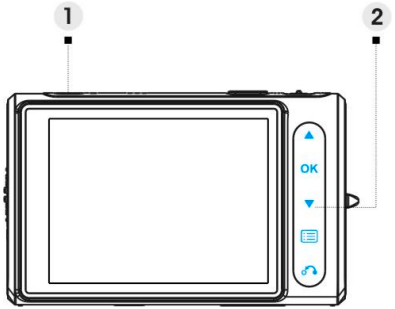
1. Upon loading a new battery, users will need to reset their Basic Settings.

2. Do not open the battery door or remove the battery when the camera is in the ON state. Only remove the battery and SD card when the camera is not in use, or in its OFF state.

3. If you do not plan to use the camera for a long period of time, please remove the battery and SD card.

4. In order for the Li-Ion battery to achieve optimum performance it is highly recommended to charge the battery at least 8 hours before first use or after storage for more than 3 months.

3 Turning on/off the Camera



(1) Press the **POWER** button to turn on and press it again to turn off the

camera.

(2) Touch ▼ to unlock all touch buttons.

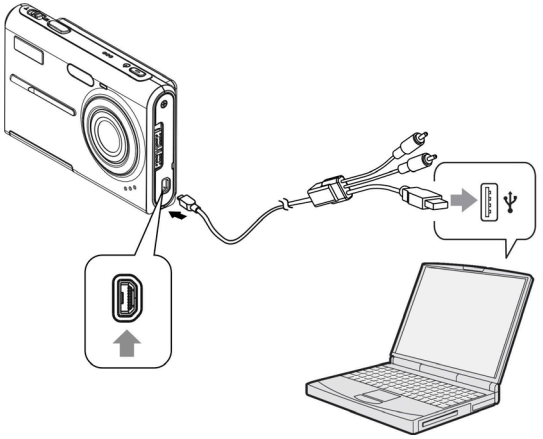
NOTE:

1. All touch buttons except ▼ will be locked automatically as your camera is turned on.

2. No operation in 20 seconds, the touch buttons will be locked with their lights turned off.

4 Charging

1. Turn off the camera.
2. Simply use the composite cable in the package to connect the Camera and your PC, and the charging process will be started.



Basic Settings

1 Language Preference Setting

There are a total of fourteen languages to choose from. Please refer to the **Language** setting function. (**Page 29**)

2 Date and Time Setting

Please refer to the **Date and Time** setting function. (**Page 28**)

3 Formatting Internal Memory / SD Card

To take pictures more effectively, format the content of the Internal Memory/SD card. To format the SD card, please insert a compatible SD card into the SD slot. Then perform the following steps:

1. Enter the Menu Setting Function.
2. Select the "**Format**" setting option from the menu using the ▲ ▼.
3. Choose "**Confirm**" and then touch OK to process.

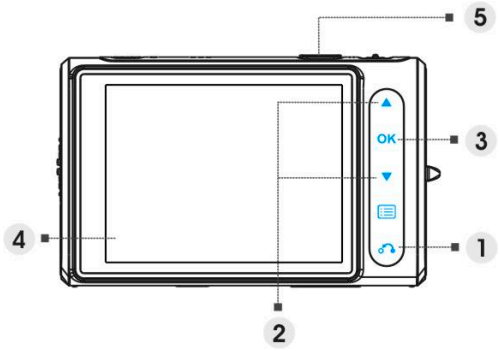
NOTE:

Formatting irrevocably erases all data in the internal memory or on the SD card, including even protected images.

Image Shooting

This Quick Start provides simple and basic directions to get you shoot image or video easily. For an in-depth description of DSC mode, please refer to page12.

1 Basic Shooting



(1) Touch to enter the Mode menu.

(2) Touch to choose **DSC** or **DV** mode.

(3) Press OK to confirm.

(4) Looking into the LCD and try to align your subject into the focus brackets.

(5) Shoot with the shutter button:

- **Still image:**
  When your subject has been aligned for shooting, press the shutter button to take picture. (If the camera is just turned on, you may skip over step (1), (2) and (3).)
- **Video:**
  Press the shutter button.
  To stop recording, press the shutter button again.

2 Using the zoom

This function works in both **DSC** and **DV** mode.

This camera has an 8x digital zoom function; there is a zoom bar on the left side of LCD display to indicate the zoom status. Press the **T** (Zoom in) button which getting closer to the subject, or **W** (Zoom out) button which moving away from the subject.

3 Flash (Selecting a flash mode for still images)

When you start to take a picture, touch ▲ to switch between Flash modes.

	Force off	Flash forced off
A	**Flash auto**	Strobes when there is insufficient light or backlight (default setting)
	Force on	Flash forced on

4 Using the self-timer

Touch ▼ to set a delay between the moment you press the shutter and the moment the picture is actually captured.

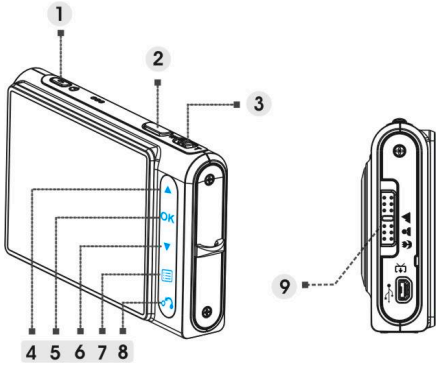
Press the shutter button, the self-timer lamp flashes until the shutter operates.

3	**3 sec**	Setting the 3-second delay self-timer.
10	**10 sec**	Setting the 10-second delay self-timer.

NOTE:

This function works only in DSC mode.

5 Basic Function Buttons



(1) Power button Turns the camera on or off.

(2) Shutter button Press to take pictures and video.

(3) Zoom button (T: zoom in／W: zoom out)

i. Use to zoom in / out.

ii. Use to adjust volume in **Video** and **Audio** play mode.

(4) Up button

i. Use to navigate the OSD menus.

ii. Use to set flash mode.

(5) OK button Use to execute item

(6) Down button

i. Use to navigate the OSD menus.

ii. Use to set self-timer mode.

iii. Use to unlock the touch buttons.

(7) Menu button Use to enter/exit setting menu.

(8) Return button Use to return to the previous menu or mode.

(9) Focus button Push to change focus mode between Macro, Normal or Infinity.

Image Viewing/deleting

1 To view images

Touch to select **Picture** mode, to review the recently taken images, and use the ▲ ▼ to view previous or next image.

For an in-depth description of **Picture** mode, please refer to page 19.

2 To view an enlarged image (playback zoom)

Press **T** while displaying a still image. To undo the zoom, press **W**.

Touch ▲ ▼ to adjust the portion.

3 To delete images

When in Picture Mode, display the image you want to delete.

1. Touch .
2. Touch ▲ ▼ to select Delete option, and touch **OK**.
3. Touch ▲ ▼ to select from **Current**, **All** or **Cancel** and touch **OK** to confirm.

For an in-depth description of **Delete** function, please refer to page 20.

How to switch mode

Please follow the instructions below:

1. Turn on the camera.
2. Touch ↩ to enter main mode menu.
3. Touch ▲ ▼ to switch between **DSC**, **DV**, **Voice Recorder**, **Picture**, **Video**, **Audio**, and **Setting** mode.
4. Touch **OK** to enter.

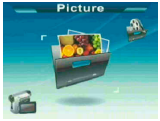
Touch ↩ until the LCD displays one of the following at any time you want to change the mode. Then start from step 3.

Mode table

DSC mode

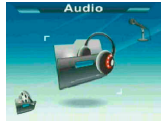
DV mode

Voice Recorder mode



Picture mode

Video mode



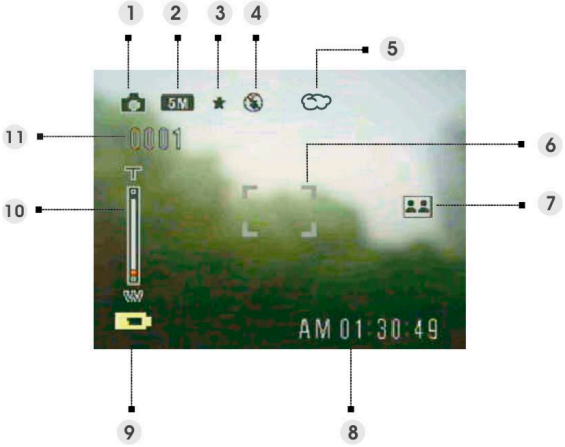
Audio mode

Setting mode

NOTE:
DSC mode is designed as the default mode when the camera is turned on.

When shooting still images

1 Indicators on the screen (DSC Mode)



(1) DSC mode icon /
(2) Photo resolution VGA / 1.3M / 3M / 5M / 7M / 12M
(3) Image quality Basic / Better / Best
(4) Flash mode No flash / Auto flash / Force flash
(5) White balance Auto / Daylight / Cloudy / Tungsten / Fluorescent
(6) Focus area /
(7) Photo setting mode (Normal / Couple shot / Continue shots)
(8) Present time /
(9) Battery indicator /
(10) Zoom bar /
(11) Picture remain /

2 DSC mode setting menu

Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

Touch to back to the previous menu.

Touch again to exit the menu at any time.

- **Scene**

Users can select from the following scene settings to suit the environment for still image shooting:

Auto / Portrait / Landscape / Night / Sport / Couple shot / Sepia / BlackWhite / Pink / Green / Blue / Self Portrait / Sunset / Dusk/Snow / Beach / Backlight / Solarize / Negative

- **Photo setting**

Normal Normal shot.

Couple shot Use this option to combine two different images in one photo. (The same function as the option in **Scene** menu).

Continue shot Use this option to take 3 photos in one shot.

- **Resolution**

This setting option allows users to set the image resolution.

640 x 480 (VGA)

1280 x 960 (1.2M)

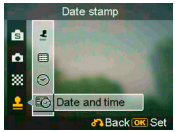
1600 x 1200 (2.0M)

2048 x 1536 (3.0M)

2592 x 1944 (5.0M) (Default)

4032 x 3024 (12.0M)

▪ Stamp



Use this option to set the date stamp shown on the images.

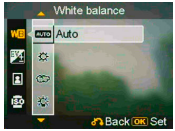
No stamp

Only date

Only time

Date and time

▪ White balance



Normally, the "Auto" WB setting will set the optimum white balance automatically. If natural colors cannot be obtained by auto WB, you can set the white balance manually to suit the particular light source. Users can select from the following white balance settings:

Auto (Default)

Sun

Cloud

Tungsten

Fluorescent

▪ EV adjust

Users can adjust exposure value using this item. You can select from –2.0 ~ 0.0 ~ +2.0.

▪ Image Quality

Use this option to set the image quality for the picture you're going to capture. A high quality picture occupies more memory space.

Basic Economical image compression ratio.

Better Less image compression ratio.

Best Least image compression ratio (Default)

- **ISO Gain**

The ISO speed determines the sensitivity to light. The higher the ISO speed number, the higher the sensitivity to light.

Auto (Default)

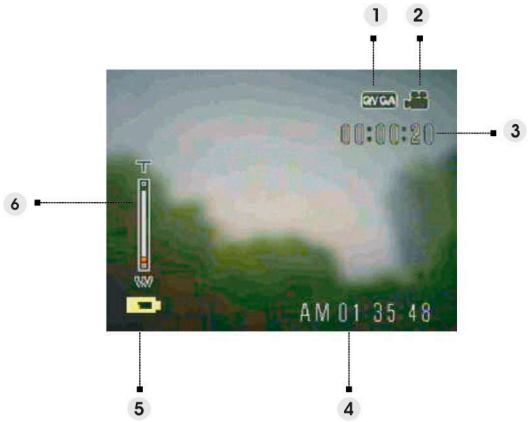
ISO 50

ISO 100

ISO 200

When shooting a video

1 Indicators on the screen (DV mode)



(1) Video resolution VGA / QVGA

(2) DV mode icon /

(3) DV time remain /

(4) Present time /

(5) Battery indicator /

(6) Zoom bar /

2 DV mode setting menu

Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

Touch to back to the previous menu.

Touch again to exit the menu at any time.

- **Resolution**

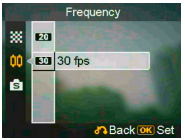
This setting option allows users to set the video resolution.

QVGA

VGA

- **Frequency**

Use this option to set 20 or 30 frames per second.



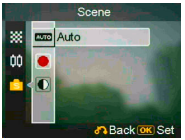
- **Scene**

Use this option to convert video image to different color areas.

Auto

Red

BlackWhite



When recording an audio clip

1 Indicators on the screen (Voice recorder mode)

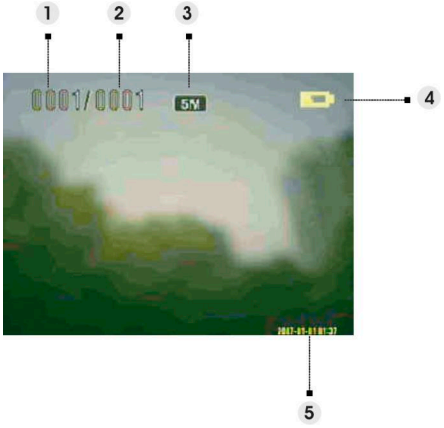
(1) Remaining recording time.

(2) **Stop:** Touch **OK** to start / stop the recording.

(3) Time escape for present recording.

Picture mode

1 Indicators on the screen (Picture Mode)



(1) Indicates the number of the present photo

(2) Indicates the total photo quantity.

(3) Image resolution

(4) Battery indicator

(5) Date stamp

- **When viewing an image:**

Press the **T** or **W** button to zoom in or out the photo.

Press the shutter button to record a 20s voice memo.

2 Picture mode setting menu

Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

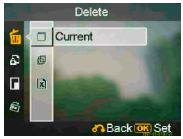
Touch to back to the previous menu.

Touch again to exit the menu at any time.

NOTE:

This function will be activated only when there is at least one image file in the SD card or the internal memory.

- **Delete**



Users can delete the current file, or all files under this option:

Current

All

Cancel

- **Protect**

Users can prevent images from accidental erasure. This option has these settings:

Protect Current
Protect All
Unprotect Current
Unprotect All

- **Resize**

Users can change the file size of an image. Once confirmed, the adjusted image will be saved as another image. This option has these settings:

VGA

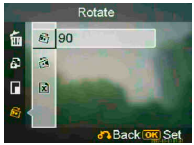
1.3M

3.0M

5.0M

- **Rotate**

This option can rotate an image 90 degree clockwise or counter-clockwise.



90

270

Cancel

- **Crop picture**

You can crop images by specifying a desired area.

1. Choose a desired scale between **4:3** and **3:2**.

2. Touch ↶ and then you can push the T/W button to reduce or magnify the image, then use ▲ ▼ to move the desired area up or down.

4. Touch ↶ again, then you may use T/W button to move the area right or left.

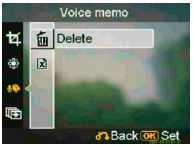
5. Once a desired section of the picture is selected, touch OK to crop the image. (The cropped image will be saved as another image either on SD card or in internal memory)

- **Customize**

This option allows you to assign the present photo as the Welcome image.

- **Voice memo**

Users can use this option to delete the voice memo of the current image.



- **Slide show**

This setting option allows users to review all images in a slide show. Users also can set the slide show interval.

Off

3s

5s

10s

- **DPOF**

DPOF is a format used to record automatic printing information from this camera. By specifying which pictures are to be printed, the pictures can be printed easily by DPOF-compatible printing service labs or on a personal DPOF-compatible printer. Users can choose to print the current image or all images:

Current

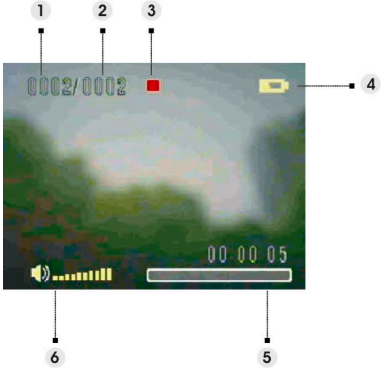
Cancel

- **Direct print**

You can connect this camera to a printer and print images directly from the camera. Connect to a printer using the USB cable exactly the same way, as you would connect a PC. Select the Direct print option to connect to a printer when the menu appears.

Video mode

1 Indicators on the screen (Video Mode)



(1) Indicates the number of the present video clip.

(2) Indicates the total video quantity.

(3) Play status indicator. Stop, Play, or Pause.

(4) Battery status indicator.

(5) Progress bar.

(6) Volume indicator.

- **When viewing a video**

When viewing a video file, the first frame of the whole video will be shown on the screen.

1. Touch **OK** to start playing, and touch it again to pause.
2. Press the shutter button to stop the playing.
3. Push the **T** or **W** button to adjust the volume.

2 Video mode setting menu

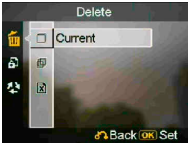
Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

Touch to back to the previous menu.

Touch again to exit the menu at any time.

- **Delete**

Users can delete the current file, or all files under this option:



Current

All

Cancel

- **Protect**

Users can prevent video files from accidental erasure. This option has these settings:

Protect Current
Protect All
Unprotect Current
Unprotect All

- **Continuous**

Use this option to play one video or all videos continuously. This option has these settings:

Current

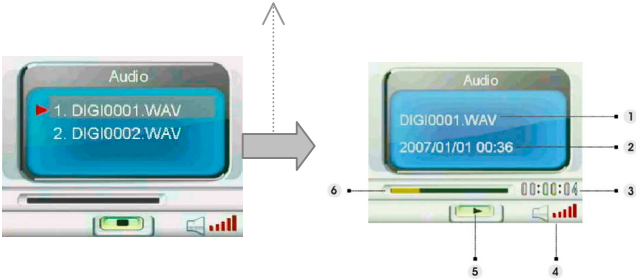
All

Cancel

Audio mode

1 Indicators on the screen (Audio Mode)

Touch ▲ ▼ to choose a clip from the play list, and then touch OK.



(1) Indicates the present playing file.

(2) Indicates the recorded date / time.

(3) Indicates the length of the present file.

(4) Volume indicator.

(5) Play status indicator. **Stop**, **Play**, or **Pause**.

(6) Playing process bar.

- **When listening to an audio clip**

1. Touch OK to start playing, and touch it again to pause.
2. Touch ▼ to stop the playing.
3. Push the **T** or **W** button to adjust the volume.

2 Audio mode setting menu

Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

Touch to back to the previous menu.

Touch again to exit the menu at any time.

NOTE:

When the voice file is in whole screen mode, touch to configure the audio play settings.

- **Delete**

Users can delete the current file, or all files under this option:

Current

All

Cancel

- **Protect**

Users can prevent audio files from accidental erasure. This option has these settings:

Protect Current
Protect All
Unprotect Current
Unprotect All

Setting mode

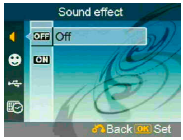
Touch the to access the menu. Then use ▲ ▼ to select the option and change the setting. Touch OK to enter the option. Use ▲ ▼ to scroll through the choices and touch OK to confirm the setting change.

Touch to back to the previous menu.

Touch again to exit the menu at any time.

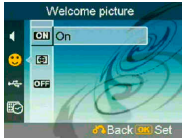
- **Sound effect**

Use this option to turn on or off the sound effect of the camera.



- **Welcome picture**

Use this option to set a welcome screen when turning the camera on.



On	Use the default flash as the welcome screen.
Customize	User can use a photo as the welcome picture.
Off	No welcome picture.

- **USB mode**

Use this option to set camera into the proper status when connected as a USB device.

Mass storage (Default)

PC camera

NOTE:

1. Before connecting the camera as a PC-Camera, please install the driver on the CD-ROM first.

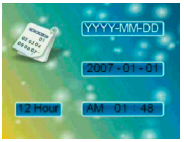
2. While in Mass storage mode, you can copy photo, video or audio files from your camera to the PC.

▪ Date and time

Use this option to set the date and time.

Push the **T/W** button to change between fields.

Use ▲ ▼ to adjust the number or the format of the date.



Tip:

Dates can be set in these formats:

YYYY. MM. DD

MM. DD. YYYY

Time can be set in these formats:

12-hour

24-hour

▪ TV system

Use this option to set the camera video output to match the TV system in your area. This option has these settings:

NTSC

PAL

▪ Frequency

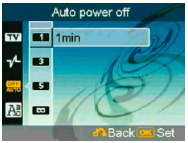
Use this option to set a light frequency that is suitable for your indoor lightening setting. This option has these settings:

50Hz

60Hz

- **Auto power off**

Use this option to set a period of inactivity after which the camera will switch itself off. This option has these settings:



1min

3min

5min

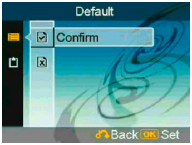
Never

- **Language**

Users can select a language from the following: English / Simplified Chinese / Traditional Chinese / French / Italian / Spanish / German / Korean / Japanese / Russian / Polish / Czech / Dutch / Danish / Thai

- **Default**

Use this option to reset all settings to the factory default.



- **Format**

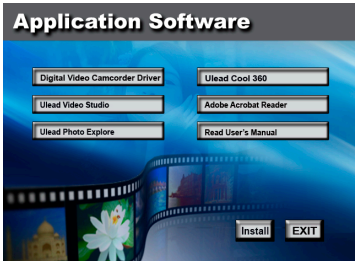
Use this option to format the data stored on the memory card or in the internal memory.

Connecting to your computer

You can display images shot with the camera on the computer. Also, you can use still images and videos from the camera more than ever taking advantage of the software.

1 Installing Software

1. Insert the CD-ROM into your CD-ROM drive.
2. The installation wizard will guide you through the installation.
3. You will be able to use the application once it's installed.

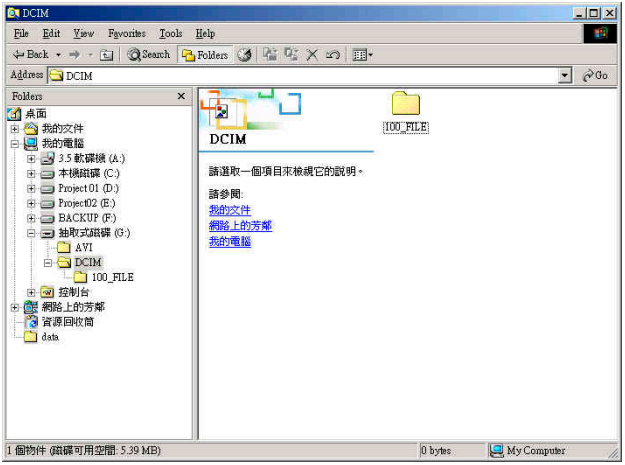


Caution:

1. **If the user didn't install the driver before plugging in a USB device, the system will detect the new device once the camera is connected to the computer. Please insert the CD-ROM and complete the drive installation.**
2. **Please install the XviD on your system, or else you may not be able to play the recorded videos on the PC.**

2 Connecting through USB

This section will guide users to download images from the camera to a PC through the USB cable.

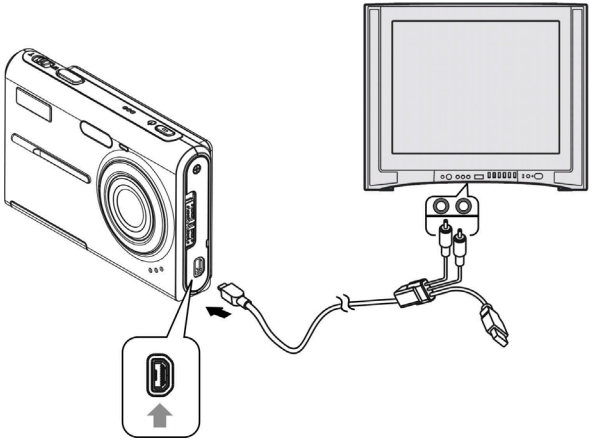


1. This camera allows users to move images or videos from the camera to a PC using MSDC support.
2. When the camera is connected to a PC, there will be one external storage device in "My computer".
3. Simply click on the folder named "DCIM\100_FILE" to find the recorded files.
4. Copy or move these files from the camera to a PC to allow editing of the images.

Viewing images on TV screen

Before connecting the camera to a TV, please set the proper TV-out protocol for the camera. (**Page 28**)

1. Connect the camera to the TV with the composite video cable (supplied).
2. Turn the camera on. You should then be able to operate the camera using the TV screen instead of the LCD. (The LCD will turn off when the camera is connected to the TV-out port).



Precaution

- **Internal memory and SD card back up**

  Do not turn off the camera or remove the battery or SD card while the camera is processing data, as the internal memory data or data on an SD card may be destroyed. Always protect your data by making a back up copy.

- **Notes on recording/playback**

  - Before you record one-time events, make a trial recording to make sure that the camera is working correctly.
  - Be careful not to get the camera wet. Water entering the inside of the camera may cause malfunctions, which in some cases may not be repairable.
  - Do not aim the camera at the sun or other bright light. It may cause the malfunction of your camera.
  - Clean the flash surface before use. The heat of flash emission may cause dirt on the flash surface to become discoloured or to stick to the flash surface, resulting in insufficient light emission.

- **On carrying**

  Do not sit down in a chair or other place with the camera in the back pocket of your trousers or skirt, as this may cause malfunction or damage the camera.

- **On cleaning**

  Cleaning the LCD

  Wipe the screen surface with an LCD cleaning kit (not supplied) to remove fingerprints, dust, etc.

  Cleaning the lens

  Wipe the lens with a soft cloth to remove fingerprints, dust, etc.

  Cleaning the camera surface

  Clean the camera surface with a soft cloth slightly moistened with water, then wipe the surface with a dry cloth. Do not use the following as they may damage the finish or the casing.

  - Chemical products such as thinner, benzene, alcohol, disposable cloths, insect repellent, sunscreen or insecticide, etc.
  - Do not touch the camera with the above on your hand.
  - Do not leave the camera in contact with rubber or vinyl for a long time.

- **On moisture condensation**

  If the camera is brought directly from a cold to a warm location, moisture may condense inside or outside the camera. This moisture condensation may cause a malfunction of the camera.

  If moisture condensation occurs

  Turn off the camera and wait about an hour for the moisture to evaporate. Note that if you attempt to shoot with moisture remaining inside the lens, you will be unable to record clear images.

Appendix

LED Status

LED Status	Status LED	Charge LED	Self-timer LED
Power Off	Off	Off	Off
Power On	Flick	Off	Off
Stand by	On	Off	Off
Flash charging	Flick	Off	Off
Self-timer	On	Off	Flick
Image saving	On	Off	Off
Video recording	On	Off	Flick
USB connection	Off	Off	On
Charge	Off	Red	Off
Charge OK	Off	Blue	Off

Specifications

Features	Content
Sensor Size	1/2.5"
Sensor Type	CMOS
Maximum Image Resolution	4032 x 3024
Still Image Size	640 x 480 (VGA) 1280 x 960 (1.3M) 2048 x 1536 (3.0M) 2592 x 1944 (5.0M) (Default) 3072 x 2304 (7.0M) 4032 x 3024 (12.0M)
Video Clip	30fps@VGA, 20fps@VGA 30fps@VGA, 30fps@QVGA
Build-in Microphone	Yes
Build-in Speaker	Yes
Build-in Memory	32 MB NAND Flash Memory
Storage Types	Secure Digital (SD) Card, MultiMedia Card (MMC) or SD High Capacity (SDHC) Card
Digital Zoom	8x
Shutter Speed	1/7.5 ~ 1/3000 sec
Focus distance	Flower: 15.5-17.5cm; People: 60-120cm; Mountain: 120cm-infinity
Voice Memo	20 seconds voice memo
Audio Recording	WAV
Sound Effect	Yes
Flash Manual Setting	Off / Auto / Force On
Self-timer	3/10 seconds delay
Continuous Shot	Yes

Compressed File Format	JPEG EXIF 2.2 (DPOF support)
Video Clip Format	AVI
LCD Display	3.0” COG LCD, 960(V) x 240(H)
Multiple Language	English / Simplified Chinese / Traditional Chinese / French / Italian / Spanish / German / Korean / Japanese / Russian / Polish / Czech / Dutch / Danish / Thai
Playback Zoom	Up to 8x
Video Out	TV out with video & audio
PC Interface	USB 2.0 High Speed
Power Source	NP-40 Lithium Ion Battery
Body Material	Plastic
Tripod Mount	Yes
Dimensions	94 x 59 x 16 (mm)
Supported O/S	Microsoft Windows 98SE, ME, 2000, XP, Vista, Mac OS 9.1
Bundled software	Ulead Photo Explore Ulead Video Studio Ulead Cool 360 Adobe Acrobat Reader